

ATTACHMENT A

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-104 (Canceled).

105. (New) A method of treating infertility by inducing immune tolerance to a paternal antigen in a mammalian prospective mother lacking said immune tolerance, said method comprising exposing a mucosal surface of said prospective mother to:

a) semen or an MHC Class I antigen of a prospective father capable of eliciting a Th-1 response; and

b) a substantially purified TGF β selected from the group consisting of TGF β 1, TGF β 2, and TGF β 3,

wherein said MHC Class I antigen is one which is present on leukocytes or in seminal plasma of said prospective father; and wherein the exposure is at a time and in an amount effective to induce said immune tolerance.

106. (New) The method according to claim 105, wherein the prospective mother and father are both human.

107. (New) The method according to claim 105, wherein the TGF β and the semen or MHC Class I antigens are administered at one site.

108. (New) The method according to claim 105, wherein the TGF β and the semen or

MHC Class I antigen are respectively administered at a first site and a different site.

109. (New) The method according to claim 105, wherein the TGF β and the semen or MHC Class I antigen are administered temporally spaced apart.

110. (New) The method according to claim 109, wherein the semen or MHC Class I antigen is administered subsequent to an administration of TGF β .

111. (New) The method according to claim 109, wherein the semen or MHC Class I antigen is administered first followed by administration of TGF β .

112. (New) The method according to claim 105, wherein the MHC Class I antigen is from sperm cells of the prospective father.

113. (New) The method according to claim 105, wherein the semen or MHC Class I antigen is presented in purified or semi-purified form.

114. (New) The method according to claim 113, wherein the purified or semi-purified semen or MHC Class I antigen is presented on an inert or adjuvant carrier.

115. (New) The method according to claim 105, wherein the prospective mother and father are human, and the concentration of TGF β is greater than 50 ng/mL, with a total dose of 150 ng.

116. (New) The method according to claim 105, wherein the TGF β is supplied in a slow release form.

117. (New) The method according to claim 105, wherein the exposure of the semen or MHC Class I antigen is to the prospective mother's genital tract in the form of the prospective father's ejaculate.

118. (New) The method according to claim 105, wherein the mucosal surface is selected from the group comprising of an oral mucosal surface, a respiratory mucosal surface, a gastrointestinal mucosal surface and a genital mucosal surface.

119. (New) The method according to claim 105, wherein the mucosal surface is a genital mucosal surface.

120. (New) The method according to claim 105, wherein the mucosal surface is exposed to a concentration of TGF β of between 100 and 400 ng/ml.

121. (New) The method according to claim 105, wherein the mucosal surface is exposed to a concentration of TGF β of 100ng/ml.

122. (New) The method according to claim 105, wherein the mucosal surface is exposed to a concentration of TGF β of 200ng/ml.

123. (New) The method according to claim 105, wherein the mucosal surface is exposed to a concentration of TGF β of between 100 and 400 ng/mL, with a total dose of between 100 to 2000 ng.

124. (New) The method according to claim 105, wherein TGF β is administered in its active form.

125. (New) The method according to claim 105, wherein the prospective mother is incapable of converting a sufficient amount of the inactive form of TGF β to active TGF β , and the method includes administration of active TGF β .

126. (New) The method according to claim 105, wherein the prospective mother is incapable of converting the inactive form of TGF β to active TGF β , and the method includes administration of plasmin, so as to increase the level of active TGF β .

127. (New) The method according to claim 105, wherein the prospective mother and father are human and the exposure to TGF β and the semen or MHC Class I antigen of the prospective father is a multiple exposure.

128. (New) The method according to claim 127, wherein the multiple exposure is performed over a period spanning at least three months prior to attempted conception.

129. (New) The method according to claim 128, wherein the exposure continues over a period of the first 12 weeks of pregnancy.

130. (New) The method according to claim 105, wherein the prospective mother and father are human and exposure is at least one week before attempted conception.

131. (New) The method according to claim 105, wherein the exposure is before attempted conception.

132. (New) The method according to claim 105, wherein administration of TGF β and the semen or MHC Class I antigen occurs at least once after attempted conception.

133. (New) The method according to claim 105, further including a step, prior to exposure to antigen and TGF β , of diagnosing or testing whether

- (a) the prospective father has adequate levels of TGF β ;
- (b) the prospective mother has the capacity to activate TGF β , or
- (c) anti-sperm antibodies are present in the prospective mother.

134. (New) The method according to claim 105, used in conjunction with IVF treatment.

135. (New) A method according to claim 105, wherein said infertility results from a condition selected from the group consisting of miscarriage, spontaneous abortion, pre-eclampsia, early embryonic loss, and implantation failure.

136. (New) A method according to claim 135, wherein said condition is miscarriage.

137. (New) A method according to claim 135, wherein said condition is spontaneous abortion.

138. (New) A method according to claim 135, wherein said condition is pre-eclampsia.

139. (New) A method according to claim 135, wherein said condition is early embryonic loss.

140. (New) A method according to claim 135, wherein said infertility condition is implantation failure.